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Waterkwaliteit in het Eems-Dollard estuarium. Wie doet er wat aan?

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Wie doet er wat aan?

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April 2012



Bèta Wetenschapswinkel

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Wie doet er wat aan?

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Concluding summary

Are the improvements needed for the Ems-Dollard estuary to meet the standards of the EU Water Framework Directive realistic? What bottlenecks are to be expected?

The EU Water Framework Directive (WFD) (2000) defines chemical and ecological goals and standards for a good quality of surface waters. Water bodies of good ecological status should deviate only slightly from the biological, structural and chemical characteristics that one would expect under undisturbed conditions. At the first WFD time limit (2015) the chemical standards for the Ems basin (including the Dollard estuary) will probably be reached. However, it is unlikely that the Ems ecology will come up to the standards, as the status was classified as moderate to poor in 2009. Nevertheless, the WFD time limits can be extended for two more periods up until 2027.

The dramatic deterioration of the Ems ecological status happened only recently. It started in the eighties, with a series of extensive dredging operations in the fairway from Papenburg up to Emden. Dredging and canalization have resulted in a strong increase in tidal range and turbidity in the tidal river upstream of Emden. The river can be characterized as fluid mud. As light penetration has decreased, there has been a huge loss of primary production of phytoplankton, resulting in prolonged periods of oxygen deficiency, affecting both the riverine and the estuarine ecosystem.

Three categories of actors in the Ems-Dollard ecological status can be distinguished: environmental NGO's, policy and economics. In the project we interviewed both Dutch and German actors from each of these categories. We found strong differences in interests and perceptions of nature. Environmental organizations aim to restore the ecosystem to a more natural state. Business parties, for instance the Meyer Shipyard, aim to expand economic activities. Government agencies are concerned to gear all interests into policy, like the Integrated Management Plan (IMP).

Governments face the challenge to adapt local and national policies to international directives. German and Dutch governments have to provide uniform regulations for the shared Ems-Dollard basin. Many bottlenecks arise. The exact location of the Dutch-German border in the estuary is disputed. There's also a difference in style of planning. Dutch planning develops from large-scale objectives up to local measures, while German planning develops the other way round. Nevertheless, the joint IMP is to be expected at the end of 2012.

Options for improvement of the Ems-Dollard ecology can be distinguished into end-of-pipe treatments, process interventions, and restoration at source. The effects of end-of-pipe treatments are marginal, like the manipulation of tides by new weirs and sluices. Reducing the width of the shipping lane is an example of a process intervention. These options might affect the ecological situation (turbidity, oxygen); the natural situation however will not be restored. Restoration in the direction of the natural reference can be achieved by for instance restoration of a system with two gullies or reconnection of old river meanders. Restoration probably conflicts with economic interests. A detailed cost-benefit analysis is needed for a funded selection of options.

Should we be optimistic about the future of the Ems-Dollard ecology? At least we noticed some activity among all actors. However, the ecological problem is not new. Environmental organizations have been urging for measures for years, but little progress has been made. Restoration of the natural reference is not realistic on short term. WFD standards are urging and so will the IMP and Natura 2000 policy. IMP and Natura 2000 policy however is aiming at conservation, not restoration of the estuary. Therefore it remains uncertain whether the WFD standard of natural conditions will be met. Serious elaboration, selection and implementation of the options for improvement are needed, as well as continued attention and openness among the actors to pass the bottlenecks.